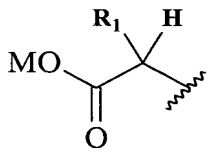
IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers characterised in that they have a polymolecularity index of under 2.2 determined in aqueous media by a gel permeation chromatographic (GPC) method, having as a standard a series of 5 sodium polyacrylate standards supplied by Polymer Standard Service as references PAA 18K, PAA 8K, PAA 5K, PAA 4K and PAA 3K, and contain at the end of the chain a pattern in accordance with the following formula (I):



- where R_1 designates an alkyl radical having 1 to 10 carbon atoms, an aromatic radical possibly substituted by an alkyl chain having 1 to 4 carbon atoms;
- and where M designates the hydrogen atom, an amine salt, ammonium or an alkaline cation.

Claim 2 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 1, characterised in that the amines are chosen from among the aliphatic and/or cyclic primary, secondary or tertiary amines ~~such as, for example, stearylamine, the ethanolamines (mono-, di-, triethanolamine), mono and diethylamine, cyclohexylamine, methylcyclohexylamine, amino methyl propanol and morpholine~~.

Claim 3 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 1, characterised in that the alkaline cations are ~~chosen~~ selected from ~~among~~ sodium, potassium and lithium.

Claim 4 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to ~~one of the claims 1 to 3~~ claim 1, characterised in that R_1 is an alkyl radical having 2 to 6 carbon atoms, and M designates the hydrogen atom, sodium or potassium.

Claim 5 (Original): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 4, characterised in that R_1 is an alkyl radical having 2 to 6 carbon atoms, and M designates the hydrogen atom or sodium.

Claim 6 (Original): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 5, characterised in that R_1 is an alkyl radical having 2 to 4 carbon atoms, and M designates the hydrogen atom or sodium.

Claim 7 (Original): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 6, characterised in that R_1 is the alkyl radical having 4 carbon atoms, and M designates the hydrogen atom or sodium.

Claim 8 (Original): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 7, characterised in that R_1 is the alkyl radical having 4 carbon atoms, and M designates sodium.

Claim 9 (Currently Amended): Copolymers of acrylic acid with hydrosoluble monomers according to ~~one of claims 1 to 8~~ claim 1, characterised in that the hydrosoluble monomers are chosen from among methacrylic acid, itaconic acid, maleic acid, 2-acrylamido-

2-methyl-1-propane sulphonic acid in acid form, or partially neutralised, 2-methacrylamido-2-methyl-1-propane sulphonic acid in acid form or partially neutralised, 3-methacrylamido-2-hydroxy-1-propane sulphonic acid in acid form or partially neutralised, allylsulphonic acid, methallylsulphonic acid, allyloxybenzene sulphonic acid, methallyloxybenzene sulphonic acid, 2-hydroxy-3-(2-propenyloxy)propane sulphonic acid, 2-methyl-2-propene-1-sulphonic acid, ethylene sulphonic acid, propene sulphonic acid, styrene sulphonic acid, and all their salts, vinyl sulphonic acid, sodium methallylsulfonate, sulfopropyl acrylate or methacrylate, sulfomethylacrylamide, sulfomethylmethacrylamide or from among acrylamide, methylacrylamide, n-methylolacrylamide, n-acryloylmorpholine, ethylene glycol methacrylate, ethylene glycol acrylate, propylene glycol methacrylate, propylene glycol acrylate, methoxy polyethylene glycol acrylate, methoxy polyethylene glycol methacrylate, propene phosphonic acid, phosphate of acrylate or methacrylate of ethylene or propylene glycol or from among vinylpyrrolidone, methacrylamido propyl trimethyl ammonium chloride or sulphate, methacrylate of trimethyl ammonium ethyl chloride or sulphate, as well as their counterparts in acrylate and in acrylamide, whether or not quaternised, and/or ammonium dimethyldiallylchloride, and mixtures thereof.

Claim 10 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to ~~one of the claims 1 to 9~~ claim 1, characterised in that they have an average molecular mass by weight (Mw) of between 1000 g/mole and 100,000 g/mole, and preferentially between 1000 g/mole and 50,000 g/mole, and very preferentially between 1000 g/mole and 30,000 g/mole, and in an extremely preferential manner between 1000 g/mole and 20,000 g/mole, determined in aqueous media by a gel permeation chromatographic (GPC) method having as a standard a series of 5 standards of

sodium polyacrylate supplied by Polymer Standard Service as references PAA 18K, PAA 8K, PAA 5K, PAA 4K and PAA 3K.

Claim 11 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to ~~one of the claims 1 to 10~~ claim 1, characterised in that they have a conversion rate of over 90%, ~~preferentially over 95%, and very preferentially over 99%,~~ determined by high performance liquid chromatography (HPLC), in which the constituent components of the mixture are separated by a stationary phase, and detected by a UV detector; after calibration of the detector, the area of the peak corresponding to the acrylic compound enables the quantity of residual acrylic acid to be obtained.

Claim 12 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to ~~one of the claims 1 to 11~~ claim 1, characterised in that they are either in their acid form, [[i.e.]] non-neutralised, or partially or totally neutralised by one or more monovalent, divalent or trivalent neutralisation agents, or neutralisation agents with higher valencies, or mixtures thereof.

Claim 13 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 12, characterised in that the monovalent neutralisation agents are chosen from the group constituted by the compounds containing alkaline cations, ~~in particular sodium and potassium, or again lithium, ammonium,~~ or from the aliphatic and/or cyclic primary or secondary amines ~~such as the ethanolamines, mono and diethylamine, or again cyclohexylamine~~.

Claim 14 (Currently Amended): Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 12, characterised in that the divalent or trivalent neutralisation agents, or neutralisation agents with higher valency, are chosen from the group constituted by the compounds containing divalent cations belonging to the alkaline earths~~, particularly magnesium and calcium, or again zinc,~~ and also by the trivalent cations, ~~particularly aluminium,~~ or ~~again~~ by compounds containing cations with a higher valency.

Claim 15 (Currently Amended): ~~Use~~ The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 16 (Currently Amended): ~~Use~~ The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 15, characterised in that the mineral matter is chosen from ~~among~~ natural or synthetic calcium carbonate, the dolomites, kaolin, talc, gypsum, titanium oxide, satin white or ~~again~~ aluminium trihydroxide, mica and mixtures of at least two ~~of these~~ fillers, ~~such as~~ selected from talc-calcium carbonate mixtures, calcium carbonate-kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or ~~again~~ mixtures with synthetic or natural fibres or ~~again~~ mineral co-structures ~~such as talc-calcium carbonate or talc-titanium dioxide co-structures~~.

Claim 17 (Currently Amended): ~~Use~~ The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 16, characterised in that the

mineral matter is a calcium carbonate ~~chosen~~ selected from ~~among~~ marble, calcite, chalk, or mixtures thereof.

Claim 18 (Currently Amended): ~~Use~~ The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to ~~one of the claims 15 to 17~~ claim 15, characterised in that 0.05% to 5% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 19 (Currently Amended): ~~Use~~ The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 18, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 20 (Currently Amended): ~~Use~~ The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 21 (Currently Amended): ~~Use~~ The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 20, characterised in that the mineral matter is ~~chosen~~ selected from among natural or synthetic calcium carbonate, the dolomites, kaolin, talc, gypsum, satin white or again aluminium trihydroxide, mica and mixtures of at least two of these fillers~~, such as~~ selected from talc-calcium carbonate mixtures, calcium carbonate-

kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or ~~again~~ mixtures with synthetic or natural fibres or ~~again~~ mineral co-structures ~~such as talc-calcium carbonate or talc-titanium dioxide co-structures~~.

Claim 22 (Currently Amended): ~~Use~~ The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 21, characterised in that the mineral matter is a calcium carbonate ~~chosen~~ selected from ~~among~~ marble, calcite, chalk, or mixtures thereof.

Claim 23 (Currently Amended): ~~Use~~ The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to ~~one of the claims 20 to 22~~ claim 20, characterised in that 0.05% to 5% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 24 (Currently Amended): ~~Use~~ The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 23, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 25 (Currently Amended): Aqueous suspensions of mineral matter, ground and/or co-ground through the use as grinding and/or co-grinding aid agents of the polymers according to ~~one of the claims 15 to 19~~ claim 15, characterised in that the mineral matter is ~~chosen~~ selected from ~~among~~ natural or synthetic calcium carbonate, the dolomites, kaolin,

talc, gypsum, titanium oxide, satin white or aluminium trihydroxide, mica and mixtures of at least two of these fillers, ~~such as~~ selected from talc-calcium carbonate mixtures, calcium carbonate-kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or ~~again~~ mixtures with synthetic or natural fibres or ~~again~~ mineral co-structures ~~such as talc-calcium carbonate or talc-titanium dioxide co-structures~~.

Claim 26 (Currently Amended): Aqueous suspensions of mineral matter ground and/or co-ground through the use as a grinding aid and/or co-grinding aid agent of the polymers according to claim 25, characterised in that the mineral matter is a calcium carbonate ~~chosen~~ selected from ~~among~~ marble, calcite, chalk, or mixtures thereof.

Claim 27 (Currently Amended): Aqueous suspensions of mineral matter ground and/or co-ground through the use as a grinding aid and/or co-grinding aid agent of the polymers according to ~~one of the claims 25 or 26~~ claim 25, characterised in that 0.05% to 5% by dry weight of the polymers is used, relative to the dry weight of the mineral matter.

Claim 28 (Original): Aqueous suspensions of mineral matter ground and/or co-ground through the use as a grinding aid and/or co-grinding aid agent of the polymers according to claim 27, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of the mineral matter.

Claim 29 (Currently Amended): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to ~~one of the claims 20 to 24~~ claim 20, characterised in that the mineral matter is ~~chosen~~ selected from ~~among~~ natural or synthetic calcium carbonate, the dolomites, kaolin, talc, gypsum, satin white or aluminium

trihydroxide, mica and mixtures of at least two of ~~these~~ fillers, ~~such as~~ selected talc-calcium carbonate mixtures, calcium carbonate-kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or ~~again~~ mixtures with synthetic or natural fibres or ~~again~~ mineral co-structures ~~such as talc-calcium carbonate or talc-titanium dioxide co-structures~~.

Claim 30 (Currently Amended): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to claim 29, characterised in that the mineral matter is a calcium carbonate ~~chosen~~ selected from ~~among~~ marble, calcite, chalk or mixtures thereof.

Claim 31 (Currently Amended): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to ~~one of the claims 29 or 30~~ claim 29, characterised in that 0.05% to 5% by dry weight of the polymers is used, relative to the dry weight of mineral matter.

Claim 32 (Original): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to claim 31, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 33 (Currently Amended): ~~Use of~~ The method of using an aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in paper formulations~~, such as in the formulation of paper coating colours and mass filling~~.

Claim 34 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in paint formulations.

Claim 35 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in plastic formulations.

Claim 36 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in cement formulations.

Claim 37 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in ceramic formulations.

Claim 38 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in detergent formulations.

Claim 39 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in formulations for the treatment of water.

Claim 40 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in drilling muds.

Claim 41 (Currently Amended): ~~Use of~~ The method of using the aqueous suspensions and dispersions of mineral matter according to ~~one of the claims 25 to 32~~ claim 25, in cosmetic formulations.

Claim 42 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in paper formulations~~, such as the formulation of coating colours and mass fillings~~.

Claim 43 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in paint formulations.

Claim 44 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in cement formulations.

Claim 45 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in ceramic formulations.

Claim 46 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in formulations for the treatment of water.

Claim 47 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in detergent formulations.

Claim 48 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in drilling muds.

Claim 49 (Currently Amended): ~~Direct use~~ The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1, in cosmetic formulations.

Claim 50 (Currently Amended): ~~Direct use~~ The method of using as a scale inhibitor agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other water-soluble monomers according to ~~one of the claims 25 to 38~~ claim 25, in formulations for the treatment of water.

Claim 51 (Currently Amended): Paper formulations~~, such as coating colours and mass-filling formulations,~~ containing homopolymers of acrylic acid and/or copolymers of

acrylic acid with other hydrosoluble monomers according to ~~one of the claims 1 to 14~~ claim 1.

Claim 52 (Currently Amended): Paint formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 53 (Currently Amended): Plastic formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 54 (Currently Amended): Cement formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 55 (Currently Amended): Ceramic formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 56 (Currently Amended): Formulations for the treatment of water, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 57 (Currently Amended): Detergent formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 58 (Currently Amended): Drilling muds, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.

Claim 59 (Currently Amended): Cosmetic formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to ~~one of the claims 1 to 14~~ claim 1.